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Purchasing Process Redesign:

a Case Study of Company X

Baumann, Beata

2014 Laurea Leppävaara

Laurea University of Applied Sciences
Laurea Leppävaara

Purchasing Process Redesign: a Case Study of Company X

Beata Baumann
Degree Programme in Business Management
Bachelor's Thesis
February, 2014

Laurea University of Applied Sciences
Laurea Leppävaara
Bachelor of Business Management

Abstract

Baumann, Beata

Purchasing Process Redesign: a Case Study of Company X

Year 2014 Pages 44

The subject of this thesis is purchasing process redesign. The need was initiated by the case company, Company X, because of a change from the locally used purchasing tool to the Supplier Relationship Management tool. The purpose of the research was to create a comprehensive process map covering the whole operational purchasing process, the roles and responsibilities and the attached sub-processes and activities at Company X, and with the help of the prepared documentation to create temporary solutions to ensure the smooth continuity of the purchasing process.

The theoretical framework of the study is based on three main topics: procurement, processes and workshops. The section on procurement contains information on aspects of procurement, levels and e-procurement tools and provides a good overview of the topic for the reader. The section on processes covers the process –related definitions and reviews different methods of process development. The section on workshops examines the theory of how workshops should be organized and facilitated, and how development requirements can be identified with the help of users.

The data was collected and analyzed using qualitative methods through the workshops by the Project Improvement Team. The workshops were used for gathering the requirements, and mapping and analyzing the processes with the help of the theoretical knowledge about processes.

In conclusion, after the data and requirement collection, and the analysis were done, procurement was found to offer temporary and long term solutions that were developed together with the parties involved. The process was redesigned accordingly to serve the needs of the users. Several manual activities were added to cover all the gaps caused by the new purchasing tool. In addition to the general tool and process change, two focus points were highlighted: technical approval and the subcontracting purchasing process. All the interim solutions offered were approved and implemented and are currently part of Company X's purchasing process in Finland.

Key words procurement, purchasing, process, process development

Laurea-ammattikorkeakoulu **Tiivistelmä**
Laurea Leppävaara
Liiketalouden koulutusohjelma

Baumann, Beata

Ostoprosessin uudelleensuunnittelu – Case: Yritys X

Vuosi 2014 Sivumäärä 44

Opinnäytetyön aiheena on ostoprosessin uudelleensuunnittelu. Tarve nousi Yritys X:n, eli kohdeyrityksen pyynnöstä paikallisesti käytetyn ostotyökalun muutoksen vuoksi. Uusi työkalu on Supplier Relationship Management. Tutkimuksen tarkoituksena oli luoda kokonaisvaltainen prosessikartta, joka kattaa Yritys X:n koko operatiivisen ostoprosessin, roolit ja vastuut sekä osaprosessit. Saatujen dokumenttien avulla voidaan luoda väliaikaiset ratkaisut, joilla varmistetaan hankintaprosessin sujuva jatkuvuus.

Teoreettinen viitekehys rakennettiin kolmesta pääteemasta: hankinta, prosessit ja työpajat. Luku hankinnoista sisältää tietoja hankintoihin liittyvistä näkökulmista, tasoista ja hankinnan sähköisistä työkaluista ja se antaa aiheesta hyvän tietopohjan lukijalle. Luku prosesseista kattaa prosessiin liittyvät määritelmät ja siinä käydään läpi erilaisia tapoja prosessien kehittämiseen. Luku työpajoista kertoo siitä, miten työpajoja pitäisi järjestää ja toteuttaa ja miten kehitystarpeet voidaan tunnistaa käyttäjien avulla.

Aineisto kerättiin ja analysoitiin laadullisiin menetelmiin Projektikehitystiimin toimesta työpajojen kautta. Työpajoja käytettiin vaatimusten keräämiseen, prosessien kartoitukseen ja analysointiin, mihin saatiin apua myös teoreettisesta tiedosta prosesseista.

Johtopäätöksenä, kun tietojen kerääminen, analysointi ja vaatimusten keräys oli tehty, hankintaprosessista vastaavat tarjosivat väliaikaisia ja pitkän aikavälin ratkaisuja, jotka on kehitetty yhdessä eri osapuolten kanssa. Prosessi oli uudelleensuunniteltu siten, että se palvelee käyttäjien tarpeita. Myös useita manuaalisia toimintoja lisättiin, jotta katettaisiin kaikki uuden osto-työkalun aiheuttamat aukot. Yleisen työkalu- ja prosessimuutoksen lisäksi kaksi tärkeää kohtaa nostettiin esiin: tekninen hyväksyntä ja alihankinnan ostoprosessi. Kaikki tarjotut väliaikaiset ratkaisut hyväksyttiin ja toimenpanttiin ja ne ovat toistaiseksi osa Yritys X:n Suomen ostoprosessia.

Avainsanat: hankinta, osto, prosessi, prosessikehitys

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1 Introduction

The standardization and automation of transactional purchasing processes is a used and proven concept within different industries to reduce cost and improve compliance. There is unanimity among the experts that the consolidation of these kinds of operations in Shared Service Centers is the best possible solution, but there are different ways to achieve this objective – one result is a completely internal solution and the other one is all the way down to complete outsourcing or off-shoring the services to external service providers. It is very important to keep in mind how poor performance in day-to-day operations can annoy the company's entire user community and damage the reputation of the whole procurement organization. (Procurement Leader 2014.)

Today there is a wide range of e-tools available that were designed to support the purchase-to-pay processes. Usually the companies' choices include the set-up and maintenance of their own electronic product catalogs or the usage of a full-service package from an external provider. For the ideal tool choice, one of the key qualifiers is the user-friendliness of the chosen solution and compatibility with the whole purchase-to-pay process. (Procurement Leader 2014.)

1.1 Background and objectives

This thesis is based on an operational purchasing process redesign project, carried out by the project improvement team at Company X. The main goal of this thesis is to create a large scale documentation of the present operational purchasing process for the company in question and with the help of the documentation redesign the existing global process into a solution that fulfills the local requirements.

The documentation is needed, because the locally used purchasing tools are being ramped down and replaced by the global purchasing tool. This change of tools, gives an excellent possibility to the local process improvement team (PIT) to redesign the purchasing process. By creating the documentation the requirements and possible problems are recognized, and a solution will be developed and offered by the procurement department to ensure the new process fulfills the requirements and tackles the problems.

The goal of the thesis will be achieved by investigating the present process, purchasing tool and the requirements by the local organization and after the outcomes the new tool can be built into the redesigned process which then can be implemented, including the solutions procurement offers.

The writer of the thesis is part of the local process improvement team (PIT) working as a local strategic buyer. This role includes daily support of strategic procurement and purchasing activities and it also has an ownership of the local process. This means that whenever changes are done, the local strategic buyers are involved as the owners of the process and the personnel doing the implementation of the changes.

1.2 Limitations

The scope of this study is mainly focused on the operational purchasing process, excluding financial and strategic questions, but including important and related sub processes. The study does not discuss the actual implementation of the redesigned process, nor the change management aspect of the project. Further and detailed deepening in general procurement is excluded, except in the theoretical framework part, due to the main object of this thesis as it principally wants to serve the Company X case. Because of the same reasons, the used definitions and terms in this thesis are selected to correspond with the context of the case-study and consequently they are not generalizable.

1.3 Structure of the thesis

This thesis consists of two main parts, the theoretical base and the case study and process construction. The purpose of the first part is to open up the essential topics for the reader and support the conclusions made in the case by examining new ideas on how to redesign the process.

The theory part of the thesis goes through procurement as a whole topic, giving the reader a good base knowledge. It goes through the different aspects and levels as well as the e-procurement tools. Then the theory of processes and process development is presented finalizing with the theoretical and practical information about workshops and especially how to facilitate a workshop and how to define requirements during one.

In the case study part the procurement function of Company X is presented. The processes were mapped during the workshops organized for the project as well as the requirements. Finally solutions are developed and offered to be implemented by the procurement team.

1.4 Client company profile

Company X is a global information technology services company that has tens of thousands of employees in almost 50 countries. It is one of the biggest companies on the global IT market but rather small in Finland. Finland as a country is part of a global business unit (GBU) with the other Nordic countries, Estonia, Belgium, The Netherlands and Luxemburg. The company offers consulting and technology services in several market sectors.

The final company profile and organization was built up when three years ago two big IT companies were merged through an acquisition. After the two companies were merged there have been a lot of duplicate or several processes and practices in house. The data migration and the process alignment is still ongoing since the merger. As only the acquired company was present in Finland before the acquisition, there are still traces of the old ways of working in the present processes. This is important to understand as it is the explanation for the existing duplicate processes.

1.5 Theoretical framework

According to Saukkonen (2013) theory is a set of laws that systemizes a phenomenon in the area of the empirical regularities. Theory can, however, refer to a wide variety of things and in each case study it is good to consider what it precisely refers to, how the theory is used and what kind of theorizing may be followed. Theory can mean for instance:

- A general framework, which is formed by earlier scientific discussion concerning the subject
- A hypothesis, that is based on knowledge logical thinking
- A hypothesis, that was already confirmed and is being tested again
- A description of a mechanism behind empirical observations
- A whole of systematically and logically organized empirical propositions

The theoretical foundation of this study is very practical in a way that however it is reflected as theory, it is very much used in the working life. The theoretical base is suited to the mixture of the case study and constructive research. The theoretical base is very modern, as its elements are related to modern sciences like information technology. From the methodological point of view, there are three important topics: procurement, processes and workshops.

The theoretical framework of this thesis can be divided into three main parts. The first part gives a good base for the reader about procurement, the different levels and aspects of procurement and about e-procurement applications. The second part tells about processes and process development. The third and final part of the theory is about workshops, how can we gather data through workshops and define requirements. Using these theoretical bases then in a separate chapter the case company's procurement and processes are presented based on the data gathered at the workshops.

1.6 Research approach

From approach point of view, the research is going to be a constructive research where the aim is to create a new process as the outcome. Constructive research is a good choice if the result is to get something concrete out of the process like a new operational model, process or approach. During the constructive research a new "reality" is being built based on the result of the research. The constructive research's outcome is usually not a new innovation, but something that is necessary or useful for a company's or functions everyday operation. (Ojasalo, Moilanen & Ritalahti 2009, 65)

In addition to the constructive research, there is a certain case studied in this thesis. As the aim of the case analysis is to gather qualitative data and document a current process and develop solutions to the possible requirements and problems, the thesis contains element from both case study and constructive research.

As this project is a constructive research, there are no predefined research questions, but there are requirements set by the project team. Some of these requirements are already known and some will be discovered during the research itself. These will be separately col-

lected in the thesis and the solutions developed as an answer will be the outcome of the construction.

1.7 Methodology

From methodology point of view, there are two types of research methods that will be used during this research. One of the types includes the methods used for data collection and the other type includes the ones for data analysis. The data was collected during workshops where the project improvement teams defined the processes and requirements. The gathered data was then analyzed with the help of process development and procurement theories and the solutions were offered in view of these theoretical bases.

2 Procurement

First of all, it is important to clarify what is the difference between purchasing and procurement as it is often mistakenly thought as synonyms. Purchasing in itself is limited to the actual buying of services, materials and other kind of assets. Procurement though includes purchasing, transporting, packaging warehousing and all the activities that are related to inbound materials. This means, that purchasing is a sub activity of procurement. (de Wit 2005 78.)

There are several aspects that can be used to describe procurement. In this chapter procurement will be described as versatile as possible to give a good base knowledge of itself for the reader.

The role of procurement within a company is to procure the necessary materials, products and services in the agreed amount, quality and timeframe for the most beneficial price, terms and conditions. The most important tasks of procurement are defining the necessary supply requirements, source for new suppliers, select and evaluate vendors, develop the cooperation with the existing vendors, reduce inventory, contribute the information flow within the supply chain, negotiate the best terms and conditions for the company, follow up market situation, measure and report the performance of the suppliers and ensure the best possible quality, price and service combination. (Ritvanen 2011, 32-33.)

However procurement is a shared function within companies, it is one of the most important functions, as it has a direct effect on a company's profitability. It has two very important roles, the first one is that it grants access for a company to the external market and it also works in an integrated way with the company's managing functions. (de Wit 2005, 78-79.)

Procurement can be local and global. Local suppliers are the ones which are located in the same country as the company. The suppliers, as contacts to the external markets can keep the company up-to-date regarding new materials, technologies, possible new partner companies and if this information is used well, it can have a direct influence on the company's effectiveness. (de Wit 2005, 78-79.)

Procurement as a function should have a very close relationship with the company's different managing functions. The top management is relying on procurement, as it is responsible for buying, renting and leasing the company's property. Production and operations management depends on procurement as all the necessary equipment, raw materials, tools and maintenance services are sourced by procurement. For human resources procurement ensures the indirect material for the maintenance of the office with for example furniture and stationary. Human resources should provide though the trained personnel for the procurement department. The financial department relies on procurement as it is the one buying all the direct and indirect commodities for the company. Of course, the financial department is the one that ensures the financial resources for all the purchases. The cooperation with information management is crucial, as it is one of the most important components of logistics management. Timely and accurate information on the level of inventory, lead times and suppliers is what procurement is built on. Marketing and sales management is the last piece of the supply chain as that is the department which provides the demand figures and what procurement bases the orders on. (de Wit 2005, 78-79.)

2.1 Levels of procurement

Procurement can be divided into strategic, tactical and operative levels. In the below chapters the different levels of procurement will be described.

2.1.1 Strategic procurement

Strategic procurement focuses on planning and development, sourcing for new suppliers, maintaining the existing vendor connections and evaluating the suppliers. As it is the most proactive level of purchasing, one of the most important tasks are preparing long term forecasts. With the well prepared and accurate long-term forecasts the demand management can be cost efficient and the supply flow and inventory can be constantly stable. (Ritvanen 2011, 32-33.)

The strategic procurement planning should occur at the top management level as it involves high risks. The long term availability of the raw materials and components are just part of it, keeping the inventory as low as possible is the real challenge, but achieving that can generate

the company savings, as the lower the inventory level the lower the investment. (de Wit 2005, 80.)

2.1.2 Tactical procurement

The second level is the tactical level. The tactical procurement focuses more on short term planning, like half year budgeting and purchasing agreements and it includes planning for the medium term with the involvement of the middle level management. (Ritvanen 2011, 32-33) The decisions made at the strategic level must be implemented by the middle level management. The tactical procurement objectives also should include – in case of a need - the search and study of a suitable inventory control system and a material flow system that should be implemented at the company. (de Wit 2005, 80.)

It is also the task of tactical procurement to plan the inventory in a way that it adjusts easily to seasonal demand patterns and to unexpected peaks and pits. The different preventive maintenance activities should be planned together with operations in such a way that it minimizes costs that would follow from breakdowns. The strategically important supplier contracts should be reviewed on a monthly basis to minimize the inventory holding costs and aiming not to pay any contractual penalty for taking insufficient volumes. (Shapiro 2011, 311.)

2.1.3 Operational procurement

The third level, operational procurement handles everyday tasks and routines, mostly in a reactive way, like handling purchase orders and processing invoices together with accounting. (Ritvanen 2011, 32-33) However operational purchasing is involved with the short term planning and it is executed by lower management based on the tactical medium term planning that was done by the middle management. Operational procurement has tasks such as conduct inventory analysis and reduce stock levels, improve and maintain relationship with suppliers and develop these relationships by assisting the suppliers and giving them technical and other support if necessary. Of course one of the most important tasks is ordering in time and following up the ordered goods or services. (de Wit 2005, 80.)

The idea of a proactive purchasing is to utilize the demand within the whole company. This means centralizing the needs, focusing the orders, decreasing the number of vendors and the level of inventory. To achieve this, communication within the whole supply chain, from requestor to vendor is essential. It helps to control and manage the supply chain from the very beginning of the demand. (Ritvanen 2011, 32-33.)

As mentioned above one of the most important tasks of operational purchasing is ensuring that the goods or services are ordered in time. If the process happens flawlessly it looks like the one demonstrated in Figure 1.

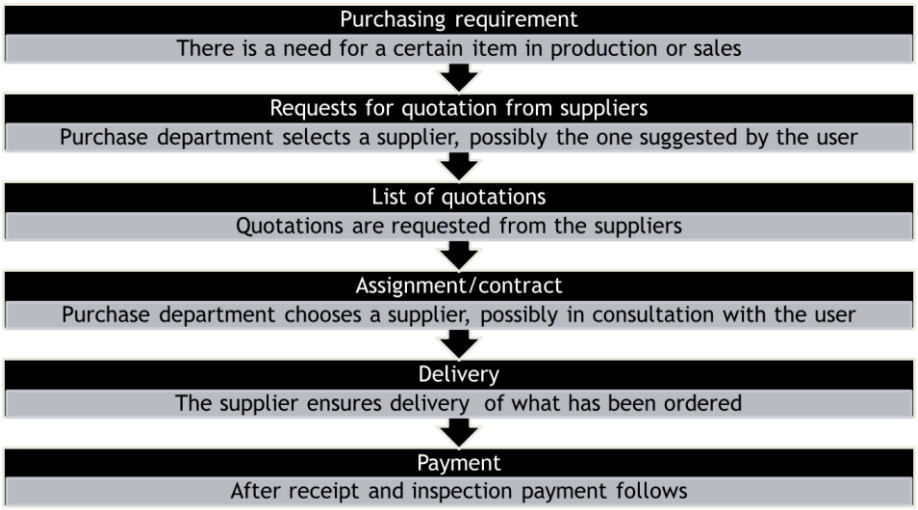


Figure 1: The operational purchasing process (Visser 2006, 251).

2.2 Procurement aspects

We can divide procurement into two main aspects, direct and indirect procurement. The most crucial differences between direct and indirect purchases are gathered in Table 1.

	Direct Materials	Indirect Materials
Use	Production	Maintenance, repair and support organizations
Accounting	Cost of goods sold	Selling, general & administrative expense
Impact on production	Any delay will delay production	Less direct impact
Processing cost relative to value of transaction	Low	High
Number of transactions	Low	High

Table 1: Differences between direct and indirect materials (Chopra & Meindl 2007, 449).

2.2.1 Direct procurement

Direct procurement incorporates all purchases that are necessary in the company's production. It can be for example raw materials or components. (Ritvanen 2011, 31-33.)

As the direct procurement is directly connected to production, the direct procurement process should guarantee that the necessary raw materials and component are available at the right place and time. The coordination of this and the constant monitoring of supply and demand should be the principal tasks of direct procurement. To enable the best possible harmony in the supply chain, the production plans and component inventory levels of the buying company should be visible for the supplier. This way the supplier can synchronize its own production to the buyer's needs. The available component inventory level at the suppliers should also be visible to the buyer, so that the components or raw materials can be ordered from the appropriate supplier. This way, the buyer can ensure on-time delivery. (Chopra & Meindl 2007, 448-450.)

2.2.2 Indirect procurement

Indirect purchases are all kind of purchases that are necessary for the company to do the everyday business, but not necessary for production, like office rent, marketing services and materials, travel and fleet. Especially during the last decades purchasing became essential, as companies are more and more focusing on their core competences and outsourcing support and shared services. This means that the volume of indirect and especially service purchases and outsourcing is much higher. (Ritvanen 2011, 31-33.)

For indirect procurement, the focus should be in on the cost of the transactions, specifically reducing the costs of the transactions. There are several reasons, why these transactions cost more than the direct orders: difficult to select the goods, no catalogs available, creating the purchase order, the approval process and sending the purchase order. Usually the problem with indirect materials is that the companies have no structured indirect procurement process or system, but they are using various ways and processes that are typically not integrated. In indirect procurement an efficient e-procurement process is essential, which enables easy search and automates the approval process as well as sends the purchase order to the supplier. This e-procurement tool could also contain valuable information for the financial department and if integrated online catalogs are available, then also for the suppliers. (Chopra & Meindl 2007, 448-450.)

For both indirect and direct procurement it is crucial, that the process enables the consolidation of the orders per goods and per suppliers. For direct procurement this consolidation results an improvement in the economies of scale, thus discounts and savings can be achieved. For indirect procurement the consolidation of the spend for each supplier can result discounts. (Chopra & Meindl 2007, 448-450.)

The categorization of the goods or commodities can be also done by their value and the level of criticality as shown in Figure 2.

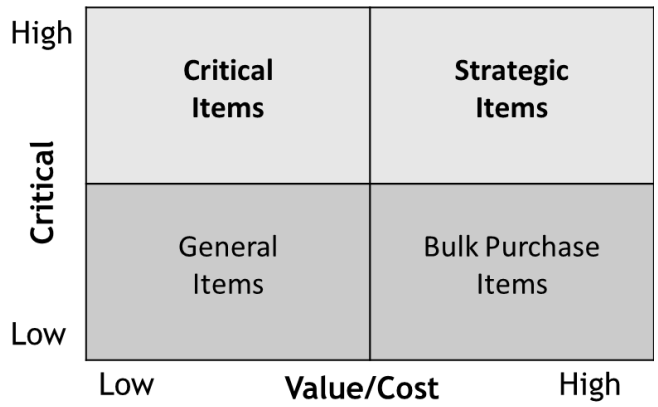


Figure 2: Product categorization by value and criticality (Chopra & Meindl 2007, 450).

Most of the indirect materials are in the general items and the aim of procurement here should be to get the purchase and the transactions costs lower. The direct materials can be divided into three groups: critical, strategic and bulk purchase items. The price level of bulk purchase items are usually similar on the market, so the supplier selection is done based on the services that suppliers provide and on their performance. With these items, well designed e-auctions can achieve significant discounts during the negotiations. Critical items are materials and special chemicals with long lead times. When procuring these, prices shouldn't be in focus, but the constant availability. With these items, procurement has a coordinative role between suppliers and production plants. Procurement should also ensure that there is an alternative source for these items in case of difficult availability. The strategic items require strategic relationships between buyers and suppliers. These suppliers should be involved in the planning phase already, so they could fully collaborate within the supply chain. (Chopra & Meindl 2007, 448-450.)

The purchasing aspects are usually divided into several different categories and subcategories. Category based purchasing management is probably the most popular way of working especially in large, international companies. (Ritvanen 2011, 34) Direct and indirect purchasing is usually managed differently. For example, direct purchases can be managed locally from the production or factory location (eg. Asia) but indirect purchases can be managed from a centralized location.

2.3 E-procurement

E –procurement usually means an internet based application that facilitates the purchasing and approval processes. The internet has hugely benefited procurement by offering tools for buyers and suppliers that enables all the purchase to pay transactions. As it shows in Table 2, these electronic interfaces give benefits in several areas. In general it reduces the procure-

ment transaction costs, harmonizes systems, makes procurement data available and makes the controlling and audits more simple and available in one tool. (Pienaar 2005, 298-299.)

Benefit source	Purchased unit cost reduction	Process improvement	Intangibles
Software-related benefits	• Increased use of price agreement	• Reduction in transaction costs, procurement and accounts • Lead time reduction	• Availability of procurement data • Simplification of user interface • Harmonization of systems
Process change benefits	• Strategic sourcing leverage • Compliance enforcement • Better demand management	• Logistics inventory cost reduction • Simplification of the control system	• Automated controls and audit trails • End user efficiency • Increased customer satisfaction

Table 2: The benefits of e-procurement (Peinaar 2005, 298-300).

There are three main types of electronic procurement tools: sourcing catalog services, electronic tendering and ordering catalog systems. (Visser 2006, 246-250.)

The idea of sourcing catalog services is that they enable organizations to source and find new suppliers that offer specific, even tailored services. This catalog is based on as many suppliers and as many products and services as available at standard prices. Usually these sourcing catalogs enable the buyer to receive further information on the service or product. The main benefits of using sourcing catalogs is reducing the supply risk, as more suppliers are available; increasing the market mechanism, as the request for quotation was sent to several suppliers that ensures the better performance in the purchasing process; and the most important benefit is an improved match between requirement and fulfillment, as more suppliers were found, there is a higher possibility that the service or product exactly matches the requirement. (Visser 2006, 246-250.)

Tendering means a procurement process done usually by tactical procurement that starts with the specification of the need and ends with the contracting and that is achieved by a competitive bidding or offering. Electronic tendering is internet based tendering, that means an application that facilitates a tender. These applications give a general support for the buyer as

through them the buyer can define which supplier can take part in the tender, the suppliers can be invited, request for information (RFI) and RFQ can be sent out, the RFI and RFQ responses can be gathered, analyzed and processed using the tool and the whole communication can be done through the interface. The main benefits of electronic tendering are that it ensures a more equal treatment of the suppliers, as most the communication happens electronically and not personally, it is not likely that there would be personal preferences. Also, electronic tendering improves the control of the tendering processes as the process is planned from the beginning till the end precisely beforehand. (Visser 2006, 246-250.)

Ordering catalog systems are electronic applications which can be used by any user of the company to create purchase requests (PR). These PRs are then sent to approval to a predefined automatic procedure (approval flow) and after the approval electronic purchase orders (PO) are generated and sent to the suppliers. The main goal of these kinds of electronic ordering catalog systems is to support the operational purchasing function. These tools can have a great impact on the management of the purchasing volumes, as these tools are usually integrated with the company's Enterprise Resource Planning (ERP) system. To run an ordering catalog system, it must include a selected and preferable contracted suppliers, predefined products and services with contract prices. One of the main benefits of an ordering catalog system is that it increases the efficiency of the operational purchasing function. (Visser 2006, 246-250.)

The use of the application saves a lot of time per transaction and shortens the lead time as well. The tool also supports the utilization of the agreed contract, as they are now available for all the users. This also means more compliance in the purchasing process, as the user can reach the approved and contracted suppliers and they do not have to bypass any processes or approvals. As all the purchasing should now go through the tool, it gives a good base for monitoring and analyzing volumes, which then can help the buyers to identify savings opportunities. This also shows who are the main stakeholders and requestors, which organizations are buying what kind of products and services from which suppliers. It means that after the analyses the buyer can decide, which contracts require further attention, renegotiation or termination. (Visser 2006, 246-250.)

The use of ordering catalog systems bring significant amount of savings in two ways: through internal costs, as the employees spend less time on related purchasing activities and the transactional costs are lower due to the centralization and saving are brought through external costs as well, as the purchasing is done through the tool from contracted suppliers on agreed prices and not incompliantly by working around the process. (Visser 2006, 246-250.)

3 Processes, process development and workshops

In the following chapter a theoretical base will be presented about processes, process elements, process documentation, process development methods. This theoretical base was used during the process mapping and it served as kind of a data collection and data analyzing method, as the process blueprints were created and analyzed with the gained knowledge of the process elements and documentation.

The theoretical base about workshops and how to define requirements through workshops is also presented, as that was the other data collection method used during the research.

3.1 Process types and elements

Process is a chain of activities that are logically linked together. They usually start from the customer and finish at customer, but it takes an input from the supplier and adds value to it and delivers to the customer. The customer can mean internal customer as well. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

Processes can be major or sub processes. A major process means a complex process that involves more than one function from the whole organizational structure and its operation has a remarkable influence on the way the organization functions. A major process can be divided into several sub processes for example by functions or by activity levels. A sub process is a part of the major process that has a specific role or target while supporting the major process. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

Activities are separate things that are included in a process or a sub process. Usually they are performed by one organization or one person. Activities are often documented as an instruction that contains all the tasks that form the activity. An activity is formed by tasks that are individual elements and subsets. A task shows how an individual item performs a particular assignment. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

An administrative business process means a series of continuous activities, by which administrative tasks are performed. These processes extend through the whole organizational framework. They define who are the enablers, what kind of techniques and methods are used, the sequence and the whole process itself where these activities are performed. One of the main goals of administrative business processes is to incorporate the databases and the organization. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

An organization is any group, company, corporation, division, department or plant. The enablers are either a technical or an organizational facility or resource that facilitates to perform a task, an activity or a process. Technical enablers are for example copying equipment, personal computers, voice response, decentralized data processing. Organizational enablers are for instance improvement, self-management, communication or education. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

A system is a set of different components, that are combined by a form of regulated interaction to form a systematized whole. It is a group of processes, that are related to each other, but that might not be connected. The components of a system can be hardware, software, procedures, human functions and other kind of resources. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

As individual systems often impact many different processes, it is important to analyze the systems in addition to the process. The systems that link the processes together have a critical role in improving the organization's over-all performance, because they define the organization itself and the operation of major processes. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

There are two main types of an organization's processes:

- Product Business Process Improvement (PBPI)
- Administrative Business Process Improvement (ABPI).

The PBPI's main target is improving the processes that are involved in the company's production. The ABPI is focused at all of the support processes, like new product development, purchasing processes and accounts payable processes. The six phases of ABPI is illustrated in Figure 4. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

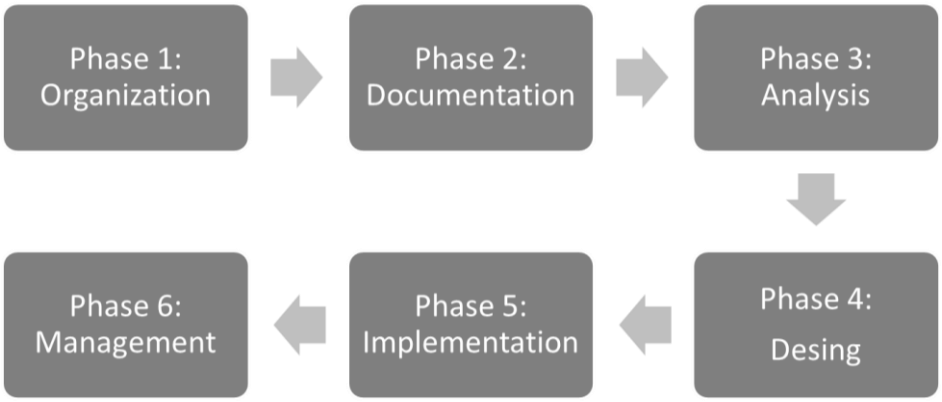


Figure 3: The six phases of administrative business process improvement (Harrington, Esseling & van Nimvegen 1997, Preface).

A general Business Process Improvement (BPI) is present at every level of every organization. The BPI methodology concepts are a focusing on a very fast improvement in each process. The BPI concept starts with focusing on defining, understanding and developing the activity flow within a major processes. The BPI should always bring significant savings in cost, cycle times, lead times and error rates. There are four BPI approaches:

- Fast Analysis Solution Techinque (FAST)
- Process benchmarking
- Process redesign
- Process reengineering

The process improvement that is documented in this thesis is process redesign. For a process redesign a Process Improvement Team (PIT) is established. They focus on a redefining a current process. Usually the current process is working fair to well but the aim is to save costs, cycle and lead time and decrease the error rates with 30-60 %. This approach is suitable to about 70-90 % of major business processes and the achievable 30-60 % improvement should give the organization a competitive advantage. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

At the beginning of the process redesign the present mode of operation is modelled. After that there are several streamlining tools are used:

- Bureaucracy elimination
- Value-added analysis
- Duplication elimination
- Simplification methods

- Cycle time reduction
- Error proofing (current problem analysis)
- Process upgrading (organizational restructuring)
- Simple language
- Standardization
- Supplier partnership
- Automation, mechanization and information technology

Usually the information technology enablers are applied after the present process activities are already optimized. This way the information technology and other computerization is supporting the optimum process, and makes sure that the information technology is the enabler and not the driver of the process. When the PIT redesigns a process, they do not create a new information technology application, but they utilize already proven best practices from other organizations. I addition to the process redesign usually a process comparative analysis is done just to ensure that the redesigned process will fulfill the needs the old process did or will serve even better. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

It is important to mention, that normally there is a continuous improvement plan for the processes that were in the scope of one of the four BPI approaches. If there is a continuous development in the process, it should grant an annual 10-15 % improvement. This is crucial, if the organization wants to hold on to the earned advantages. The results of the improvement, as the documentation, can be used as base for the future improvement. It should be also used in the change management, for instance at the training of the stuff. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

3.2 Process documentation

To be able to understand, define and then improve a process, the very first step is the documentation. The documentation should contain all the process tasks and they should be linkable to the organizations' business plans and to the organizations' critical success factor. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

Usually there are several reasons that drive this kind of process improvements. For instance:

- Implementing a new IT system
- Merger of two or more organizations
- ISO standard requirements
- Customer or law-imposed requirements
- Cost and time savings

- Preparation for audits

The documentation is also beneficial when the changes are made to an existing process because it makes it possible to compare the suggested solution. The documentation can be also used for transfer of knowledge within the improvement project or after it is done. The documentation is also valuable, when no improvement project is planned, but there is continuous quality control ongoing. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

It is important to choose the most suitable technique for the documentation. One of the most common documentation methods is diagramming. A diagram gives the user a clear and brief picture of the number of factors in the administrative business process. It might also contain a short explanation. In the diagrams different symbols are used that represent tasks, activities even departments or persons. The diagram should present the core of the administrative business process, which can be a system or an entity. It should be clear and as simple and user friendly as possible. (Harrington, Esseling & van Nimvegen 1997, 1-18.)

Diagramming is also known as blueprinting is a process analyzing method which can help to identify the different roles, phases and step and it can help to define which of these are critical and where can be weak links and possible problems. During the analysis a process flowchart is drawn which contains all the above mentioned roles, phases and steps and more importantly it reveals all the invisible parts as well. Through the flowchart the possible problematic areas can be visualized. The flowchart can visualize the process objectively, so that all counter parts can see the process as a whole. This objectivity can help with the process development. (Ojasalo, Moilanen & Ritalahti 2009, 158-159.)

3.3 Workshops as a development method

A requirement workshop is a structured and facilitated meeting participated by a group of stakeholders and content experts, who's aim is to work together define, create, refine and finally reach closure on deliverables. Deliverables can be models or documents, for example process documents. They represent the user's requirements. Working in workshops has a lot of benefits, like it encourages communication within the team; it contributes to decision making and mutual understanding. If there is a gap between project stakeholders, requirements workshops could build a bridge to bypass it. The requirements workshop is led by the facilitator, who asks focused questions to help in the model co-creation and definition of the requirements at different levels. By the model co-creation the participants are also mutually learning at the workshop. (Gottesdiener 2008, 9-14.)

The participations of the requirements workshop should be the key project stakeholders. Each of these workshops should be treated a mini-project, in this thesis' case, mini business project. As any normal project it also requires planning, clarification of the roles and infrastructure. It has three phases, the beginning, the middle and the end phase. The deliverables should be defined beforehand, but they might change during the project. (Gottesdiener 2008, 9-14.)

During the workshop there should be a strong collaboration between the group members. It means that there has to be an agreement on the working methods and approaches and a shared purpose or goal. Collaboration has to be engineered to the team. There should be IT and business experts in the group to reach maximal utilization of the collaboration. For the same purpose, it is also important that the workshop principles, decision making processes, deliverables and pro- workshop activities are also defined beforehand. (Gottesdiener 2008, 9-14.)

The role of the facilitator is crucial, as that is the person who holds the whole workshop together and makes the whole course smooth. The facilitator has to be well prepared to hold the workshop even if it requires a lot of pre-work. However the workshop requires a lot of input from the facilitator, usually the decision making is not his/her responsibility. The facilitator remains neutral and guides the group through the whole workshop. Often there is an additional person, a so called recorder whose role is to capture the group's work. Nor the facilitator or the recorder act as experts, so they can focus on the process flow of the workshop. The facilitator has to balance the content of the workshop, the whole process and the participants. The balance of the content means that the facilitator has to ensure, that the requirements are delivered in time before the workshop and they are detailed enough to work with them. The balance of the workshop process means that the facilitator follows that the process goes on within a logical order and predefined timeframes. He also makes sure, that the participants engaged with the process and energized. Balancing the participants means, that the facilitator supports the participants to try innovative and new methods, build a relationship, learn and interact within the group to utilize maximal performance. (Gottesdiener 2008, 9-14.)

Workshops are about information exchange, discovery and creation and they require a lot of interaction from the participants as the goal is to create something innovative. They can be very intense and diverse and the participants might have to carry out activities in different forms: individually, in subgroups or as a member of the whole group. Usually the participants have to do some pre-work as well. During the workshops very strong visualization is used through different methods, like posters, post-it notes, diagrams or cards. (Gottesdiener 2008, 9-14.)

However Gottesdiener (2008, 9-14) focuses on requirement workshops in her book, she adds that the workshops are an excellent tool project and strategic planning, process improvement and problem solving by using the general principles of how the carry out and facilitate a workshop.

4 Case study: analysis and process improvement

In this chapter the case analysis and the process improvement will be described. To understand the background, further information will be shared about the procurement and processes of Company X.

4.1 Procurement at Company X

Generally from organization point of view, Company X is divided into Global Business Units (GBU). The GBU's can represent a group of countries or one country, depending of the size of the business and market. Because of this and the fact that the Company X was merged from two big firms, the procurement function at Company X is local and global. There are local buyers in several countries who are representing the strategic and tactical procurement levels for several categories. There are also procurement sub functions that are centralized and also offshored. These sub functions are representing the operational procurement level. Teams within this sub function are the Order Desk and the Vendor Master Data team. There is no separate tactical procurement level at Company X, but the tactical tasks are mostly handled by the local and GBU level strategic buyers. If strategic-operational and global-local responsibility of the different procurement roles should be illustrated within Company X, it would look like Figure 4.

Figure 4: Global-local and strategic-operational roles at Company X.

In case of Company X, the purchasing aspects are not representing such a huge role, as the company's core products are IT services. As Company X mostly acts as a service provider there is no actual and physical manufacturing or physical factory with production, so from this point of view there is no direct purchasing and physical supply chain. There is however a clear category division that classifies the purchases. There are three master categories: IT, Non-IT and Subcontracting. These master categories are then divided into fourteen categories and those categories into several sub-categories that include the different commodities that are purchased.

If these categories should be divided by the direct-indirect aspect, the Non-IT master category could be classified as an indirect master category. The IT and the Subcontracting master categories are however not so clear cases, as they include direct and indirect commodities as well. For example, within IT, the personal computers, mobile phones and peripherals are indirect commodities, but almost everything else is direct like servers, software licenses and maintenance. Within Subcontracting the situation is the same. The commodities under Professional Services are indirect, but the Bid and Project Subcontracting and the Personnel categories are mostly direct purchases (except when personnel or subcontractors are hired to shared functions, like finance or marketing). This is important especially from the local buyers' point of view, because they might be responsible for several categories, which means that they have to handle direct and indirect purchasing tasks. Global Lead Buyers and Category Managers are however only responsible for one category or subcategory, but of course on a global level.

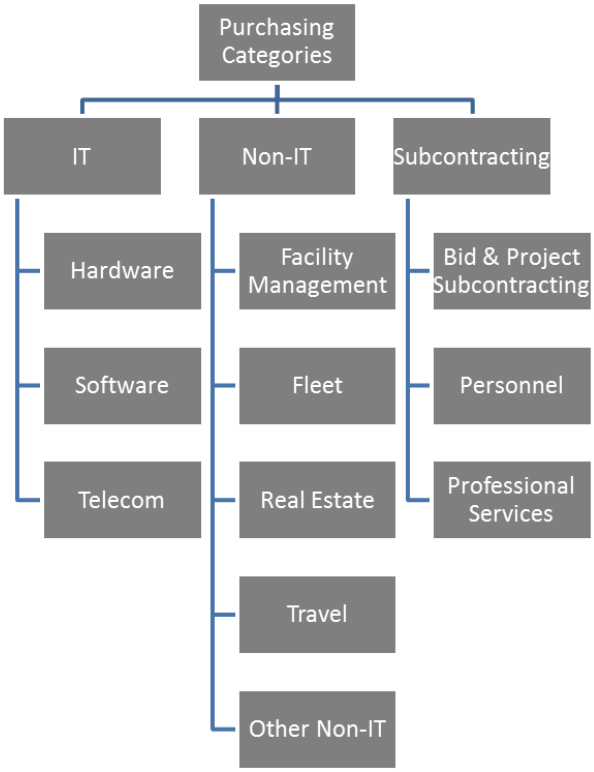


Figure 5: Purchasing category mapping at Company X.

In addition to the regular and everyday procurement tasks at Company X like sourcing, negotiations and contracting, the local or GBU buyers are also responsible and owners of the purchasing processes. In practicality it means that together with the help of process managers the processes are formulated, maintained and constantly developed.
It means that the local buyers are the process owners and in case of a process change – local or global - they are responsible of those projects. They also act as key users for the purchasing tools and with that role they are responsible for access rights and tool trainings and general support for the users.

4.2 E-procurement at Company x

As discussed earlier in the chapter about e-procurement, most of the companies are using some kind of a tool to make procurement more efficient and transparent. At the beginning of this project Company X is using two separate and independent tools for purchasing. At this point, it is important to note, that both tools were used strictly for operational purchasing, not for the complete procurement process, so sourcing and tendering are not discussed. In addition, the Lotus Notes based tool was used for several sub processes that are partly related to purchasing and these will be discussed later.

The first, Lotus Notes based tool is the remainder of one of the merged companies and the other one is the official purchasing tool of the new company and is integrated to the company's Enterprise Resource Planning (ERP) system which is SAP. However, the official, SAP based purchasing tool gives very little visibility to the orders and that is probably the reason why it was decided to replace it with a new e-procurement tool.

Due to the local and global requirements the current purchasing process at the time was very long, including a duplicate approval flow. As it is illustrated in the Appendix 1 blueprint, the whole process started in the Lotus Notes based tool and after the approval process, the purchase request was inserted into the SAP based tool, for further approvals. The approvers were partly the same but the Lotus Notes based tool´s approval flow was mapped according to the local organization and the SAP based tool's approval flow was mapped according to the GBU organization. Based on the feedback received from the users and the own user experience of the strategic buyers, the following advantages and disadvantages were collected as demonstrated in Table 3.

Tool/Process	Advantages	Disadvantages
Lotus Notes based tool	• Very flexible • Easy to make approval flow modifications • Attached to several sub processes in the same tool • User friendly • Historical purchasing data • Transparency	• Non-compliant • Too easy to make modifications • Cannot be integrated to the company ERP system
SAP based tool	• Compliant	• Not flexible • Not transparent • No historical purchasing data
Old purchasing process	• Locally centralized (with the use of the purchasing coordinators)	• Non-compliant • Lot of duplicate approvals • Extremely long lead time • Requestors has no visibility to their official orders • Easily generates a huge backlog to the gap between the two tools • Vendor receives purchase orders very late after the fact

	• Requestors are ordering through unofficial channels, because it is a faster way

Table 3: Advantages and disadvantages of the old purchasing tools and process.

To sum up and emphasize the greatest disadvantages of the old purchasing process, it is important to know, that from local point of view, the Lotus Notes based tool was more important and the financial approval was done already in that approval process, as finance is presently one of the budget holders. After that approval was given for the purchase request, the purchasing coordinators manually inserted the request to the SAP based tool, but that part of the process was done because it was a "must" and because that was the tool that generated the official purchase order. The reason why the SAP based tool gives out such poor historical purchasing data, is because the reporting possibilities are very limited and because when the purchase request is inserted to the tool, it was not done with such precision, as it was done by the requestor to the Lotus Notes based tool. As this is a manual and time consuming activity, it easily generated a huge backlog between the two processes. It causes an especially big problem in the Subcontracting category, where is only one purchasing coordinator. Important note, the subcontracting purchasing coordinator is actually called partner coordinator, as the role includes all the related activities when purchasing services from a subcontractor.

The backlog between the two tools and the extremely long lead time also causes that the suppliers receive their official purchase orders very late after the service or product delivery. This is non-compliant, as Company x has a "No PO no pay" policy, which means, that nobody should be allowed to buy any products or services without an official purchase order. The official purchase order is crucial, because it ensures that the requested service or product is technically or otherwise a fit to Company X and its needs and there is a budgeted amount for the purchase.

4.3 Workshops results

As there are several other activities handled through the Lotus Notes based tool attached to purchasing, now that tool will be ramped down, these activities and requirements must be mapped by the Process Improvement Team (PIT). The PIT must ensure that with the best possible utilization of the new purchasing tool and process these activities will be handled. To gather all the necessary data, two separate workshops were organized and as already mentioned in the theoretical part, these workshops also functioned as data collection method.

4.3.1 Workshop for general process mapping and defining the requirements

There were two separate workshops organized to define the general process and purchasing related sub processes (Figure 6). It is important to note, that these processes are not owned by procurement, but until any other global solution is implemented, procurement must ensure that these sub processes are transferred and attached smoothly to the new tool and process.

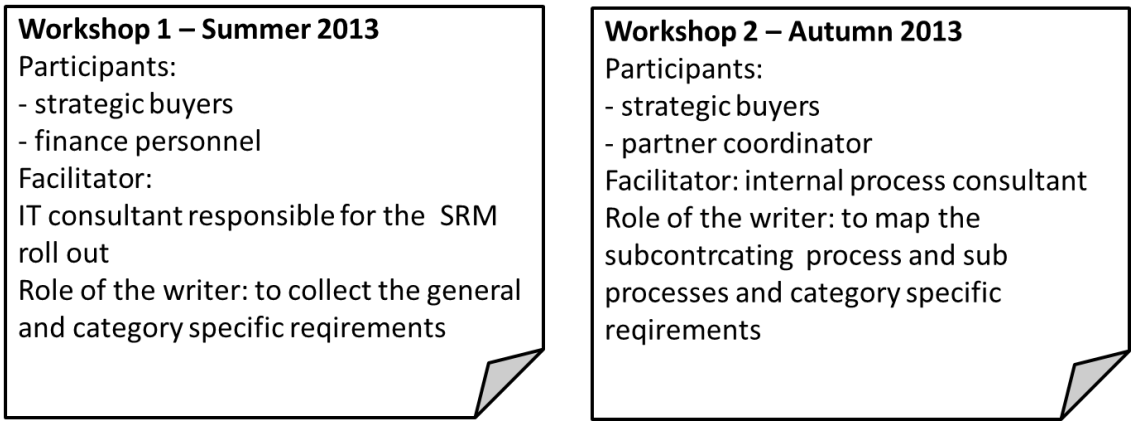


Figure 6: Workshop participants and scope.

The first workshop was held during 2013 summer before the implementation of the new purchasing tool. It was facilitated by the IT-consultant who is responsible for the local technical rollout of the new purchasing tool, Supplier Relationship Management (SRM). SRM is being globally implemented at Company X and the version was tailored to fit the needs of the global procurement. During the first workshop the PIT included the IT consultant responsible for the technical rollout, the local buyers as process owners and finance department members. The whole purchasing process from end to end was mapped and blueprinted (Appendix 1).

Related to the general process several important topics came up. One of them was that how to ensure, that the requestors understand that according to the new tool and process they are officially responsible for their own purchases, as there are no purchasing coordinators to create the official requests.

The other important point is that the PIT has to ensure is that the approvers are aware of their profit and lost responsibility. Profit and Loss (P & L) responsibility means, that the approver has to monitor the net income after expenses for a department or for a certain organization, with direct influence and responsibility on how the resources of company are allocated. The personnel, who have P & L responsibility, usually give final approval for new purchases and projects, and they are also required to make budget cuts if necessary. They also have to ensure that every program or project is generating a positive return of investment. (The

Executive Search Blog. 2010) As mentioned earlier, the two purchasing tools have slightly different approval flow mappings. The Lotus Notes based tool includes only local approvers and the SAP based tool includes GBU level approvers as well. Due to this fact, a finance responsible person, who has a very good knowledge of the P & L situation, has always been involved in the approval of a certain request on the local level, but now that the local tool will be ramped down, this responsibility has to be shifted to the service line approvers and depending on the value of the request, finance might not be involved in the approval process at all.

Due to the flexibility of the Lotus Notes based tool, there were several sub processes that were inserted to the purchasing process. There are two important sub processes from purchasing point of view. The first one is a technical approval for all direct, IT related purchases. It is a very important task, as the compatibility between the purchased item and the existing environment is essential. The technical experts in the service lines are responsible for controlling and monitoring this activity, as the local buyers have simply not enough technical knowledge to take this kind of responsibility. As the Lotus Notes based tool was flexible enough, this additional approval step was mapped to the original approval flow and when the requestor was creating a purchase order for IT category, the purchase request required approval from the technical approver as well. In case the item to be purchased was not suitable with the current environment, the technical approver could inquire or reject the request and if necessary advise the requestor. The technical approval did not concern all the subcategories, for example laptops for personal use were excluded.

This process was diagrammed in a separate flowchart as illustrated on Figure 7.

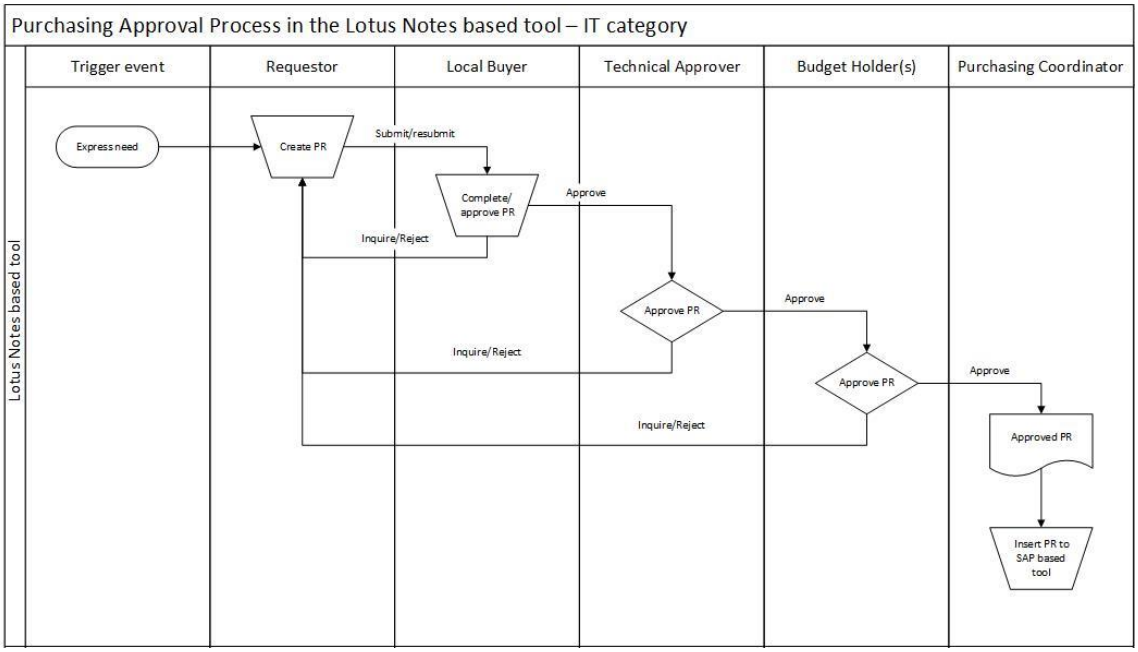


Figure 7: Lotus Notes tool base purchasing approval for IT category purchases.

During the first workshop the other important identified sub process from purchasing point of view, the subcontracting purchasing was mapped and diagrammed. There are two different kind of subcontracting purchasing at Company X. The first type is purchasing subcontracting – fixed priced services. This is typical when the purchased service is for example a whole project. The second type is purchasing time and material (T & M) based subcontracting services, which is really common in this industry, as often it is impossible to estimate the length of a project or the need of for example an IT consultant. Based on a very rough estimation, a certain amount of hours are ordered from the supplying subcontractors and the subcontractor is reporting the done working hours on a weekly basis. Then the invoicing is done based on the actualized hours, usually on a monthly basis.

When Company X is purchasing T & M subcontracting services, a lot of related tasks and activities are involved. These activities are taken care of by the partner coordinator, who triggers these activities, when the purchase request reaches that approval role in the Lotus Notes based tool as demonstrated in Figure 8:

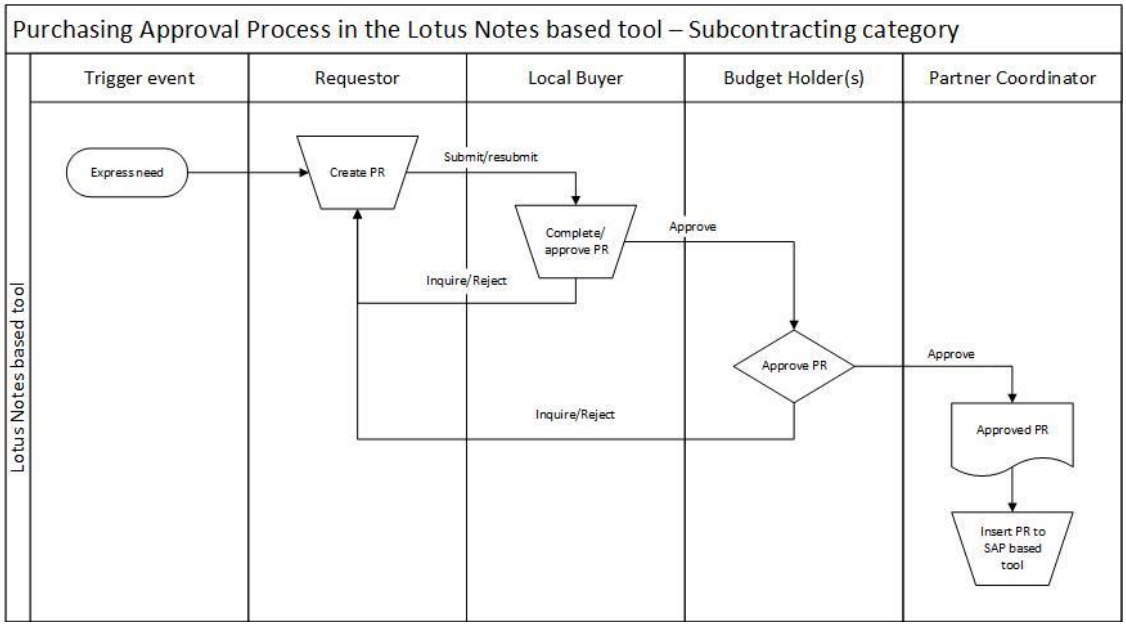


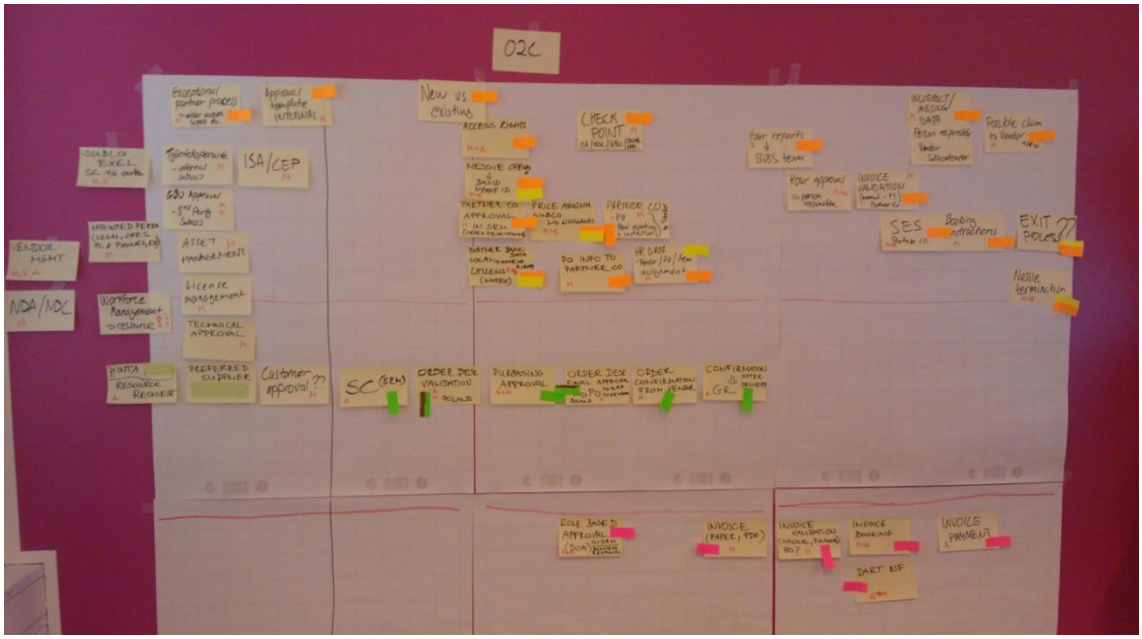
Figure 8: Lotus Notes tool base purchasing approval for Subcontracting T & M purchases.

As this sub process includes a various activities, so a second workshop was organized to map all sub processes, activities and tasks and to figure out a new way of working after the process redesign.

4.3.2 Workshop for subcontracting process and sub process mapping

The second workshop session was organized later during 2013 autumn. IT was facilitated by a former process consultant. Her role was simply facilitation, she is not familiar with the pro-

cess or sub processes. The participants were the local strategic buyers and the local partner coordinator. The goal was to get a complete picture of the process and sub process when purchasing T & M subcontracting services. During the workshop, the process flow including all the tasks and activities was visualized in a horizontal flowchart. To get the complete picture, all the possible parties were illustrated and the tasks and activities were located in the appropriate spots (Picture 1). The parties in the flowchart are: procurement, partner coordination, finance and human resources. It is important to note, that however the whole so called subcontracting process was mapped, this thesis only focuses on the sub processes and activities that are directly related to the operational purchasing process.



Picture 1: Workshop for mapping the subcontracting process, sub processes and activities.

As mentioned earlier, procurement is not the owner of these sub processes and activities, but until a comprehensive global process is implemented, procurement is responsible, that these sub processes and activities are working smoothly after the process redesign. The most important sub processes are illustrated by Figure 9. Only the dark rounds are directly attached and fully procurement responsibilities, but all the lighter rounds are triggered by the first step of the purchasing process, the creation of the purchase request.

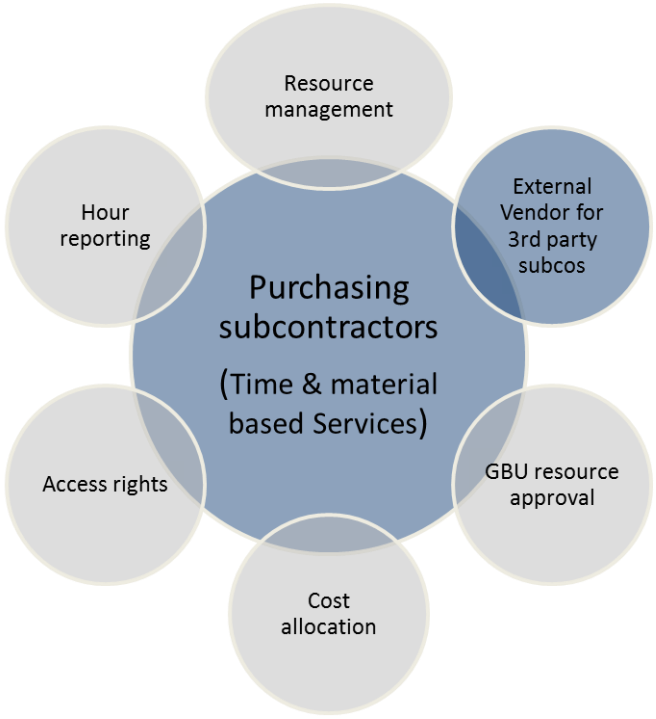


Figure 9: Purchasing subcontracting and the related sub processes.

As the result of the workshop, the following activities were identified as ones that are triggered by the purchasing process:

- Resource management
  - Checking internally, if an internal IT expert is available
- External Vendor for 3rd party subcontractors
  - Choosing the appropriate vendor (All possible subcontractors should be contracted through Company X's Managed Service Provider)
- GBU resource approval
  - An internal Global Business Unit level approval is requested for the subcontractor
- Cost allocation
  - Establishing the subcontractor to our ERP system
  - Price assignment to the subcontractor
  - WBS code assignment to the subcontractor (this is the cost element where the subcontractor's hours are booked)
- Access rights
  - Establishing the subcontractor to the Lotus Notes based system (only because the access right to different IT platforms are requested through this tool)

- Hour reporting
    - After the approval of the purchase request, the hour reporting instructions and the Purchase Order number is sent to the supplier

To ensure that these sub processes and activities are triggered, certain information has to be delivered for the partner coordinator about the subcontractor (eg. Subcontractor's personal and contact data, ID numbers if already exists, supplier's contact, etc.). This information could be inserted to the Lotus Notes based tool, to the purchase request. The PIT team has to ensure, that these requirements are taken into consideration and somehow fulfilled in the redesigned process.

4.3.3 New purchasing process and its enabler, the SRM tool

Before summarizing all the requirements and possible problem sources, the new operational purchasing process and its enabler the SRM tool has to be presented to see the options and limitations it offers. Supplier Relationship Management (SRM) is an SAP based and integrated electronic purchasing tool that is being implemented globally at Company X. The software was tailored to fit the needs of the global procurement at Company X. SRM is basically an ordering catalog system that is available for all the users within Company X when they need to purchase products or services. These kinds of needs are then expressed by creating a purchase request or Shopping Cart (SC) as it is called in SRM. After the SC is created and submitted for approval, it goes through a predefined approval flow. The approval flow in case of SRM contains the following approvers: order desk, the operational procurement approval, purchasing, the strategic level procurement approval; the budget holders, as the Profit & Lost approval. The purchasing and the budget holder approval can contain several approvers, depending on the value of the SC. The higher the value, the more approvers are involved.

As this is a catalog ordering system, of course there a predefined integrated catalogs in SRM. This means that for often purchased items, like mobile phones or personal computers, catalogs are created based on the models, terms and prices that are agreed with the contracted suppliers. In case of catalog purchases, the procurement approval is skipped, as the catalogs are based on the agreements negotiated and signed by procurement. If the wanted item cannot be found in any of the available catalogs, the requestor can create a non-catalog SC, which has no predefined items, but the requestor has to describe what is being purchased and as to choose the correct purchasing category as well. Most of the Shopping Carts are non-catalog, as the industry specific product and services can wildly vary. Without going into deeper technical details, the new purchasing process is demonstrated on Figure 10.

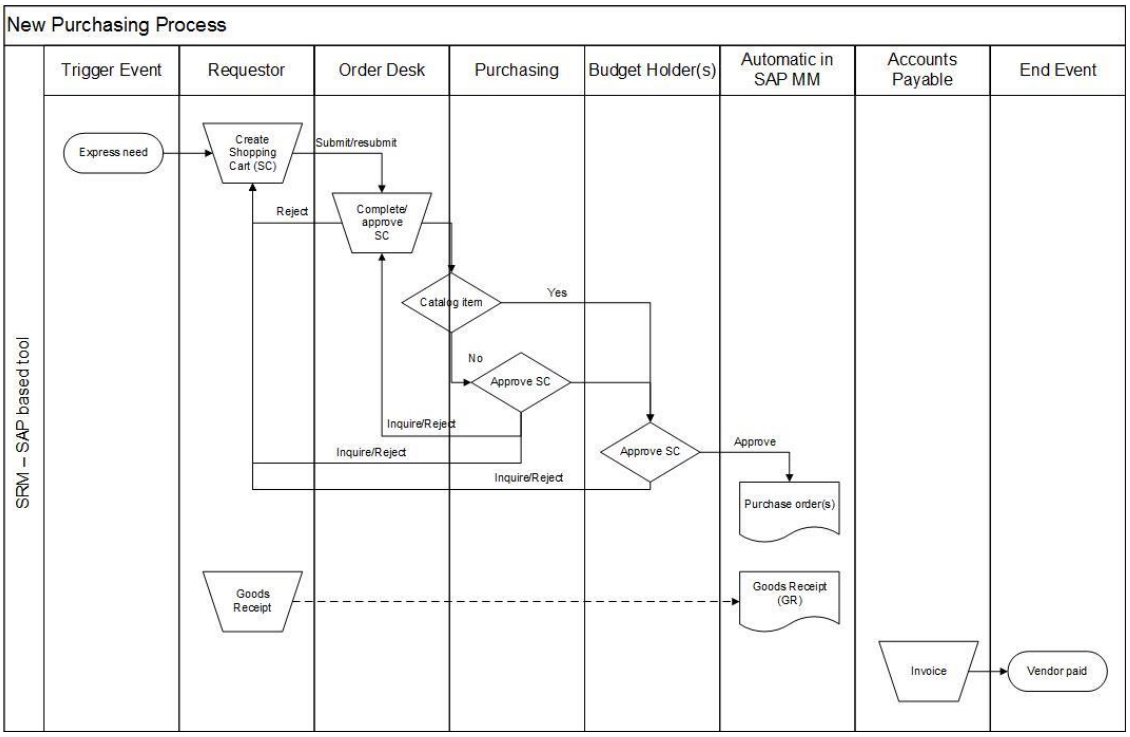


Figure 10: Purchasing process by the new enabler, SRM.

As demonstrated on the diagram, according to the new tool, the responsibility from the purchasing coordinators is shifted to the requestors themselves. They are responsible to follow the purchase request or Shopping Carts (SC), as they are called in SRM. They have to see through, that the SC is fully approved and sent to the supplier. After the delivery of the service or products, they have to create the Goods Receipt (GR) to SRM to acknowledge, that the delivery was correct and the invoice can be posted for payment when it arrives.

The approval flow in the new tool is the GBU level approval flow. The technical approver and the partner coordinator are not automatically included to the approval flow, as this tool was tailored to fit operational purchasing requirements and not local sub processes and activities.

4.3.4 Requirements and solution suggestions as the result of the workshops

The requirements were collected and the processes and sub processes were mapped through two separate workshops. In this chapter the requirements will be gathered and interim and long term solutions will be suggested. The requirements were gathered by the writer of the thesis and the solutions were elaborated by the writer and the other local strategic buyer.

Requirement	Interim solution	Long-term Solution
1. SRM tool usage training for the requestors	Tool training provided by the process managers and local buyers.	Continuous support provided by the local buyers, including one-to-one sessions if necessary.
2. SRM tool usage training for the approvers	Tool training provided by the process managers and local buyers.	Continuous support provided by the local buyers, including one-to-one sessions if necessary.
3. New process responsibility knowledge transfer to the requestors	Process and new responsibility training provided by the local buyers, highlighting the responsibility for the SC follow up and for the GR creation.	Continuous support provided by the local buyers, including one-to-one sessions if necessary.
4. New process responsibility knowledge transfer to the approvers	Process and new responsibility training provided by the local buyers and finance, highlighting the Profit & Lost responsibility.	Continuous support provided by the local buyers and finance, including one-to-one sessions if necessary.
5. Technical approval should be facilitated in the purchasing tool	The technical approver should be added to the approval flow by the Order Desk manually if the SC categorization is direct, IT purchases. Local buyers and process manager instruct order desk.	Responsibility should be shifted to the service lines. Service lines should agree on their own sub process and internal communication channels to ensure that the only IT products purchased fit the current environment.
6. Data about new subcontractors should flow through the new tool	As there are no such fields in SRM that would fulfill this requirement, an excel template should be implemented, that contains the necessary data. Order desk should check whether the excel is attached and only approve the SC if it is included.	Responsibility should be shifted to human resources and resource management. They should agree on their own sub process and internal communication channels to ensure that the data is received without further manual actions from procurement.
7. Subcontracting sub processes should be triggered during the purchasing approval	As the partner coordinator is not included to the approval flow automatically, order desk should add the role as additional approver to the SC.	Responsibility should be shifted to human resources and resource management. They should agree on their own sub process and internal communication channels to ensure that all the necessary sub processes are triggered without further manual actions from procurement.

Table 4: Requirements and solution suggestions.

As suggested in requirement 6 the excel template to be implemented would contain all the necessary data field that is essential for the partner coordinator to start the required sub processes and activities. It would also contain a brief instruction for the requestors, reminding them when to use the excel sheet. In Appendix 2 is an example of the excel sheet that should be implemented.

In general, the fact that there is now only one tool, available for all users, transparent, gathering all the history, is going to provide very valuable data for purchasing. Also, as there are no two tools and a gap between the two tools, the SC processing is much faster, so the lead times are shorter. This decreases the ratio of non-PO purchases which means that the number of compliant purchases is higher. This also means, that the relationship with the suppliers will improve, as there will be less delay in payments, as the purchase orders are generated more quickly.

5 Summary and suggestions for further research

The purpose of this thesis was to create a comprehensive process map covering the whole operational purchasing process, the roles and responsibilities and the attached sub-processes and activities. The aim was that with the help of the prepared documentation, procurement could tackle the raising problems and offer at least interim solutions for the requirements that were collected by the Project Improvement Team (PIT). These problems and requirements were collected by the PIT during the workshops organized for the process redesign. These workshops served as data collecting methods for the thesis. The other data collecting method was blueprinting that was entirely done by the writer of the thesis.

The event that has initiated the need for the above mentioned documentation and interim solutions is the implementation of the new global purchasing tool, SRM at Company X. This implementation project also gave a possibility for the PIT to redesign the whole purchasing process, of course as much as the global limits are letting it.

After the data collection, analysis and gathering the requirements, procurement offered interim and long term solutions that were developed together with the involved parties. In addition to the general tool and process change, two focus points were highlighted: the technical approval and the time and material (T & M) purchasing process.

All the offered interim solutions were approved and implemented and are currently part of the Company X's purchasing process in Finland.

The whole research flow is illustrated in Figure 11.

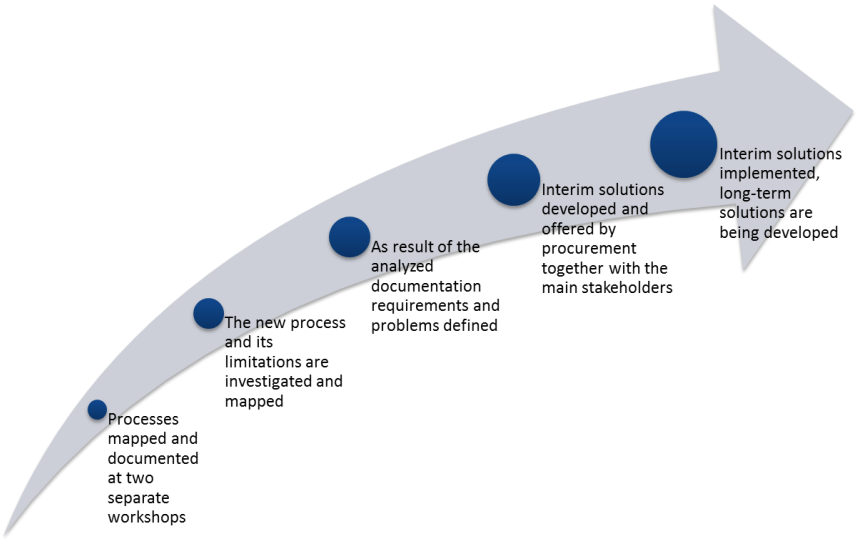


Figure 11: Research flow.

Due to the recent and continuous organizational changes, these interim solutions are functioning as long as the final transition is done and these processes are replaced by a final and more appropriate solution, owned and carried out by the respective organizations and not procurement. As the outcome of thesis was to offer at least temporary solutions, the project can be considered as a success.

As this thesis concerns the change of a bigger whole – meaning organizational and structural changes - but is limited to the operational purchasing process, it would be ideal to investigate the change management aspect of the event. That research could study how the change management was led and executed within the user community and within the group of purchasing coordinators, for example, the kinds of training sessions were provided, the materials that were used, and how the communication was done.

The other topic is to continue further the research of this topic, and investigate the suggested long-term solutions. This would involve several organizations, as both the service lines and other shared functions are involved. This could be a topic related to strategic changes, as they would be changes that should be decided at a higher level and communicated to the lower streams.

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Illustrations

Figures

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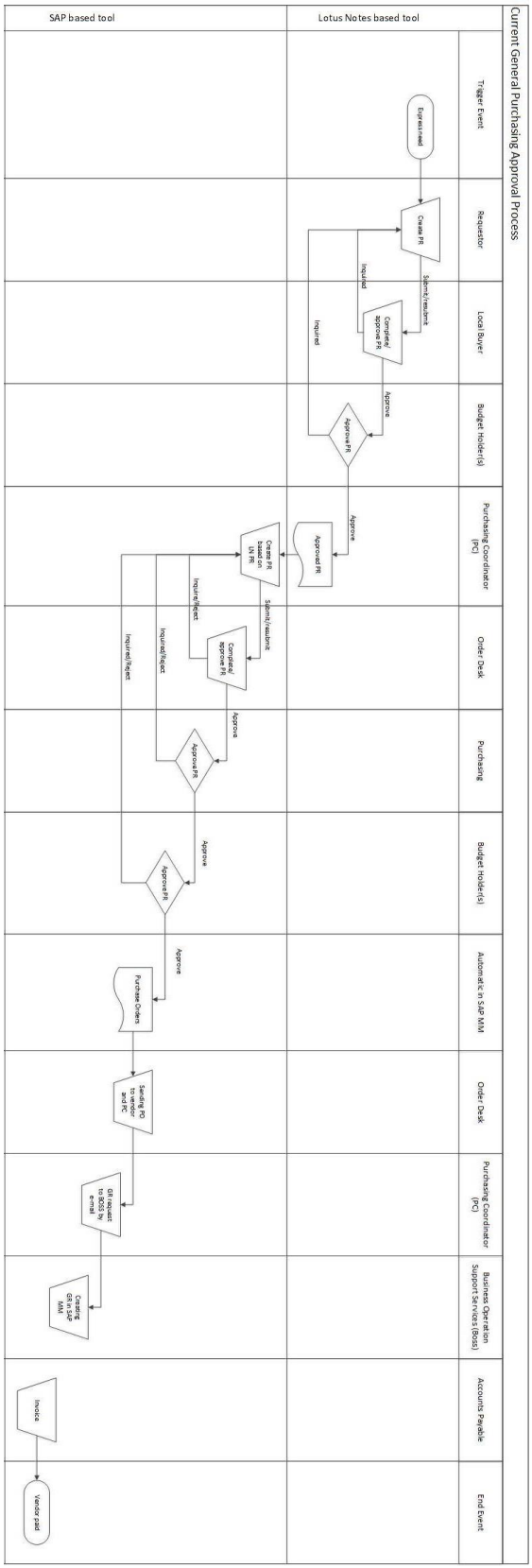
Appendices

Appendix 1



Appendix 1. Current (old) Operational Purchasing Process

Appendix 2.

ALL the fields must be filled in.

First name	
Last name	
e-mail	
Phone	
System ID*	
ERP ID*	
Service line	
Vendor contact person	
Needed User Access Rights	
WBS	
Period (eg. 1.10.2013-31.12.2013)	

**)if not known, please contact the partner coordinator*

Must be enclosed to SRM request in the following categories:

B12345	Branded IT serv T&M	*All IT services purchased on Time and Material basis to SW and HW companies – excludes maintenance & support in categories Hardware and Software, and training services which have a specific code.*
B23456	IT services T&M	*IT services on a T & M basis covering service delivery types and assignment modes which are beyond pure staffing (contingent worker). Also IT services on T&M basis contracted through the bid process are part of this category.*
B34567	Overseas subco - T&M	*IT services on a t&m basis covering service delivery types and assignment modes which are beyond pure staffing (contingent worker). Also IT services on T&M basis contracted through the bid process are part of this category.*

Appendix 2. Excel template to be implemented for T & M Subcontracting Shopping Carts